4.3 BIOLOGICAL RESOURCES

This section addresses biological resources that could be affected by implementation of the project. The information presented is based on data collected during a reconnaissance field survey, aerial photograph interpretation, database searches, and a review of existing information.

A reconnaissance-level biological survey of the project site was conducted by EDAW biologists on April 20, 2004. The purpose of this survey was to characterize the existing biological resources present in the project area and to evaluate the potential for sensitive biological resources to occur on the project site. With regard to biological resources, a follow-up survey was conducted on August 20, 2004 to identify potential biological impacts associated with replacement of an offsite water line.

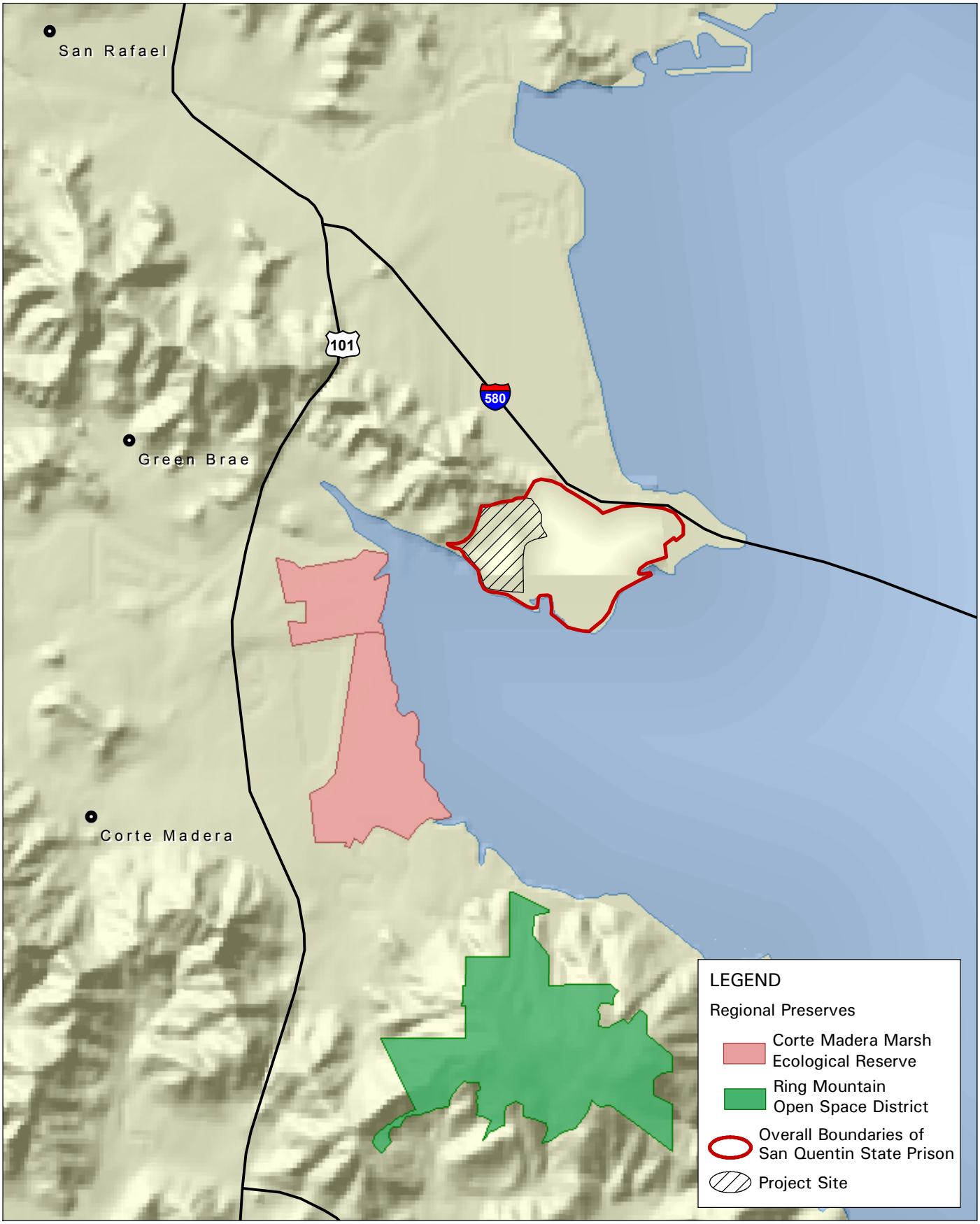
4.3.1 EXISTING CONDITIONS

The 40-acre project site is located on the grounds of the existing SQSP. The entire project site has been graded, developed, or is otherwise disturbed as a result of prior construction and operation of the prison and associated facilities. No previously undisturbed natural plant communities are present on the site and a large portion of the project site is located on a former landfill used during the early parts of the 20th century. A prominent hill known as "Dairy Hill" is the only natural landform on the project site. Project biologists determined that the project under either design option would not result in impacts that differed under each condition. Therefore, the analysis provided in this section is applicable to both design options, and a separate discussion for each option is not provided because it would be redundant. Further, a separate discussion of anticipated biological impacts under each capacity scenario (i.e., budgeted versus maximum) is not provided because these scenarios would not alter the footprint of project development or disturbance.

Although the project site does not include biologically important habitat, several areas that are known to support sensitive biological resources are present within a few miles of the project site. The project site is located immediately adjacent to the biologically rich San Francisco Bay. The Corte Madera Ecological Reserve, which supports threatened and endangered species including the California clapper rail (*Rallus longirostris obsoletus*), California black rail (*Laterallus jamaicensis coturniculus*), salt marsh harvest mouse (*Reithrodontomys raviventis*), and Point Reyes birds-beak (*Cordylanthus maritimus ssp. palustris*) is located less than 0.5 mile southeast of the project site, across San Francisco Bay (Exhibit 4.3-1). The Ring Mountain Ecological Reserve, which supports several threatened and endangered plant species including Tiburon mariposa lily (*Calochortus tiburonensis*), Tiburon indian paintbrush (*Castilleja affinis ssp. neglecta*), Tiburon jewelflower (*Streptanthus niger*), and Marin western flax (*Hesperolinon congestum*), is located approximately 1.5 miles southwest of the project site. This reserve also supports serpentine bunchgrass grassland, a sensitive natural community tracked in the California Department of Fish and Game's (DFG's) Natural Diversity Database (CNDDB). The oak woodland located on the hillsides north of the project site and north of Sir Francis Drake Boulevard could also support sensitive biological resources.

VEGETATION

Vegetation on the undeveloped portion of the project site includes landscaped areas, maintained grassy fields, and patches of non-native grassland that receive little maintenance (Exhibit 4.3-2). Vegetation in landscaped areas is mostly maintained as lawns; ornamental trees and shrubs are also present around buildings and open fields. Common ornamental tree species present include eucalyptus (Eucalyptus spp.), cork oak (*Quercus suber*), Monterey cypress (*Cupressus macrocarpa*), and pines (Pinus sp.). Vegetation in areas where maintenance is infrequent and irregular is dominated by non-native grasses



Source: California Legacy Project 2003

Regional Preserves

EXHIBIT 4.3-1

San Quentin State Prison Condemned Inmate Complex Project Draft EIR

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such as wild oats (*Avena fatua*), soft chess (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), Italian ryegrass (*Lolium multiflorum*), and weedy forbs such as English plantain (*Plantago lanceolata*), redstem filaree (*Erodium cicutarium*), fennel (*Foeniculum vulgare*), shortpod mustard (*Hirschfeldia incana*), and bristly ox-tongue (*Picris echioides*). Scattered coyote brush (*Baccharis pilularis*) shrubs and Himalayan blackberry (*Rubus discolor*) brambles occur on the slopes of Dairy Hill.

No salt marsh vegetation is present along the rocky shoreline of the San Francisco Bay. However, a short and narrow excavated ditch, located near the south edge of the project site, supports a few small patches of wetland vegetation (Exhibit 4.3-2). This ditch is located in a low area where it collects runoff from underground pipes that are part of a stormwater system used to drain the prison grounds and surrounding area. The ditch is hydrologically connected to the San Francisco Bay via a culvert and is tidally influenced. Plants present in the ditch, which include pickleweed (*Salicornia virginica*) and Bermuda grass (*Cynodon dactylon*), are widely scattered among rock that was presumably placed in the bed of the channel to minimize soil erosion. Plants observed along the banks of the ditch include gumplant (*Grindelia sp*.) and iceplant (*Carpobrotus edulis*). The vegetation in the ditch is presumably removed periodically by maintenance staff.

The alignment for the water supply pipeline is primarily located within the existing roadway alignment of Sir Francis Drake Boulevard or along the unvegetated shoulder areas. The alignment crosses through an area of oak woodland near its eastern terminus. Several native trees including bay laurel (*Umbellularia claifornica*) and coast live oak (*Quercus agufolia*) are present within the alignment but coast live oaks are present on both sides of the pipeline route. The understory includes a mix of native and non-native herbaceous.

WILDLIFE

The project site provides habitat for a number of native and non-native wildlife species that are common in this region of Marin County. Most of the animals are species that are adapted to urban areas and other environments altered by humans. Bird diversity is expected to be highest among the major vertebrate groups. Birds that are common in the project area include non-native species such as rock pigeon (*Columba livia*), house sparrow (*Passer domesticus*), and European starling (*Sturnus vulgaris*). Ornamental plants and weedy fields attract birds that are considered year-round residents in Marin County; these include California towhee (*Pipilo crissalis*), Brewer's blackbird (*Euphagus cyanocephalus*), and northern mockingbird (*Mimus polyglottos*). A flock of resident Canada geese (*Branta canadensis*) frequent the lawns and near the shoreline of the San Francisco Bay. Some of the geese apparently nest on prison property. Weedy and ornamental vegetation also attracts migratory birds such as white-crowned sparrow (*Zonotrichia leucophrys*), savannah sparrow (*Passerculus sandwichensis*), and hermit thrush (*Catharus guttatus*). Although the project site is located immediately adjacent to the San Francisco Bay, few bird species found on the open water are expected on the project site, other than common gulls. Reptiles, amphibians, and mammals in the project area are expected to be limited to those that are common in residential areas in Marin County. The developed portion of the project site includes a residential area. Vegetation in the residential area is characterized by common ornamental plant trees and shrubs, including roughly 100 mature trees. Common ornamental plants in the residential area include cork oak (*Quercus suber*), coast redwood (*Sequoia semperrvirens*), pyracantha (*Pyracantha* sp.), and privit (*Ligustrum* sp.).

Wildlife expected along the water supply pipeline alignment would be similar to wildlife species expected for the project site.

Sources: USGS DOQQ 1993, Kitchell 2004, EDAW 2004

Habitats in and Adjacent to the Project Area

EXHIBIT 4.3-2

San Quentin Prison Condemned Inmate Complex Project Draft EIR

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SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources evaluated as part of this analysis include special-status species and sensitive habitats. The CNDDB was used as the primary source to identify previously reported occurrences of special-status species and sensitive habitats in the project vicinity. The CNDDB is a statewide inventory, managed by DFG that is continually updated with the location and condition of the state's rare and declining species and habitats. Although the CNDDB is the most current and reliable tool for tracking occurrences of special-status species, it contains only those records that have been reported to DFG. To identify additional special-status plant species with potential to occur in the project area, a search of the California Native Plant Society's (CNPS's) online Inventory of Rare and Endangered Plants of California (CNPS 2004) was also conducted for the St. Quentin and surrounding quads. Other sources include both published and unpublished data and reports.

Special-Status Species

Special-status species include plants and animals in the following categories:

- Species listed or proposed for listing by U.S. Fish and Wildlife Service (USFWS) or DFG as Threatened or Endangered under ESA or CESA.
- Species considered as candidates for listing as Threatened or Endangered under Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA).
- Species identified by DFG as California Species of Special Concern.
- Plants listed as Endangered or Rare under the California Native Plant Protection Act.
- Animals fully protected in California under the California Fish and Game Code.
- Plants on CNPS List 1B (plants considered by CNPS to be rare, threatened, or endangered in California and elsewhere) or CNPS List 2 (plants considered by CNPS to be rare, threatened or endangered in California but more common elsewhere). The CNPS lists are used by both DFG and USFWS when considering formal species protection under ESA and CESA.

Special-Status Plants

Special-status plants that have been documented in the immediate vicinity of the project site include white-rayed pentachaeta (*Pentachaeta bellidiflora*) and Point Reyes bird's beak (*Cordylanthus maritimus palustris*) (NDDB 2003).

White-rayed pentachaeta is federally and state listed as endangered and is on CNPS List 1B. This species was reported in 1980 on private property at Punta de Quentin, 1.3 miles west of Point St. Quentin. However, a site visit conducted in 1991 revealed that the small population previously documented had been extirpated. White-rayed pentachaeta is found in valley and foothill grasslands on open, dry, rocky slopes, often on soils derived from serpentine bedrock. This species is not expected on the project site because suitable habitat is absent.

Point Reyes bird's beak is a federal species of concern and is on CNPS List 1B. This species was reported in 1987 at the Corte Madera Ecological Reserve. Two other populations previously occurring on the St. Quentin quad are considered extirpated. Point Reyes bird's-beak is restricted to coastal salt marsh. The project site does not support suitable habitat for Point Reyes bird's-beak.

Other special-status plant species that have been reported on the on the St. Quentin quad include: Tiburon mariposa lily (*Calochortus tiburonensis*), which is federally and state listed as threatened and on CNPS List 1B; Tiburon indian paintbrush (*Castilleja affinis neglecta*), which is federally listed as endangered, state listed as threatened, and on CNPS 1B; Marin western flax (*Hesperolinon congestum*), which is federally listed as threatened, state listed as threatened, and on CNPS 1B; and Tiburon jewel-flower (*Streptanthus niger*), which is federally and state listed as endangered and on CNPS List 1B. All of these species occur in valley and foothill grassland on serpentine substrates on the Tiburon peninsula. They are not expected to occur on the project site because of the lack of suitable habitat.

Showy indian clover (*Trifolium amoenum*), which is federally listed as threatened and on CNPS List 1B, also has previously been recorded from the St. Quentin quad. This species occurs in valley and foothill grassland and in coastal bluff scrub and was last seen in Corte Madera in 1961. It is not expected to occur in the annual grassland at St. Quentin, because of the heavily disturbed nature of the plant community and long history of disturbance and maintenance.

Special-Status Wildlife

Wildlife species listed as threatened or endangered that have been documented within a 1-mile radius of the project site include California clapper rail, salt marsh harvest mouse, and California black rail (CNDDB 2003, Shuford 1993). Other special-status wildlife species that could occur in the immediate vicinity of the project site include salt marsh common yellowthroat and San Pablo song sparrow. All five of these species are associated with tidal salt and brackish marsh habitat.

California clapper rail is state and federally listed as endangered. It is also fully protected under Section 3511 of the California Fish and Game Code. This species prefers salt marshes intersected by numerous tidal channels and dominated by cord grass, pickleweed, and salt grass (USFWS 1984). In Marin County, breeding California clapper rails are restricted to salt marshes along the shorelines of the San Francisco and San Pablo bays. The Corte Madera Ecological Reserve is a known breeding location for the California clapper rail (Shuford 1993). California clapper rail is not expected on the project site because no suitable habitat is present.

Salt marsh harvest mouse is state and federally listed as endangered and given fully protected status under Section 4700 of the California Fish and Game Code. This species inhabits salt marshes with dense cover dominated by pickleweed. Salt marsh harvest mouse is known to occur at the Corte Madera Ecological Reserve (USFWS 1984). Salt marsh harvest mouse is not expected on the project site because no suitable habitat is present.

California black rail is state listed as threatened and is fully protected under Fish and Game Code. This bird in found in habitat that is similar to that which supports California clapper rail. California black rail is known to breed at the Corte Madera Ecological Reserve (Shuford 1993). California black rail is not expected on the project site because of the absence of suitable habitat.

Salt marsh common yellowthroat and San Pablo song sparrow are both known to inhabit salt and brackish marshes along the San Francisco Bay, in Marin County (Shuford 1993). No suitable habitat for salt marsh common yellowthroat or San Pablo song sparrow is present on the project site.

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies, or that are afforded specific consideration through CEQA, Section 1600 of the California Fish and Game Code, and/or Section 404 of the federal Clean Water Act (CWA) as discussed below under Regulatory Background.

Sensitive habitat in the project area is limited to the excavated ditch located near the south edge of the project site. The ditch is hydrologically connected to the San Francisco Bay by culvert and is tidally influenced. Although this ditch provides minimal biological value and does not support salt marsh or other native plant communities, filling it would be of concern to state and federal agencies with relevant jurisdiction because of its wetland characteristics and because it provides a hydrological link to the San Francisco Bay. Please see the discussions below (Regulatory Background) for further information.

4.3.2 REGULATORY BACKGROUND

Important regulations that protect biological resources and that may be applicable to the project are discussed below.

Federal Regulations

Federal Endangered Species Act

The USFWS and the National Oceanic and Atmospheric Administration (NOAA) Fisheries have authority over projects that may affect the continued existence of a federally-listed (Threatened or Endangered) species. Section 9 of ESA prohibits the take of federally-listed species; take is defined under ESA, in part, as killing, harming, or harassment. Under federal regulations, take is further defined to include habitat modification or degradation where it actually results in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

Section 7 of ESA outlines procedures for federal interagency cooperation to conserve federally-listed species and designated critical habitat. Section 7(a)(2) requires federal agencies to consult with USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species.

For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain incidental take authorization under Section 10(a) of ESA. Section 10(a) of ESA allows USFWS to permit the incidental take of listed species if such take is accompanied by a Habitat Conservation Plan (HCP) that includes components to minimize and mitigate impacts associated with the take.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for international migratory bird protection and authorizes the Secretary of the Interior to regulate the taking of migratory birds. MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird. The current list of species protected by MBTA can be found in Title 50, Code of Federal Regulations Section 10.13. The list includes the nearly all birds native to the United States. Loss of non-native species, such as house sparrows, European starlings, and rock pigeons, are not covered by this statute.

Clean Water Act

Pursuant to Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) regulates discharge of dredge or fill material into waters of the United States. Waters of the U.S. and their lateral limits are defined in 33 CFR Part 328.3 (a) and include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are

adjacent to any of these waters or their tributaries. Fill is defined as any material that replaces any portion of a water of the United States with dry land or changes the bottom elevation of any portion of a water of the United States. Any activity resulting in the placement of dredge or fill material to waters of the United States requires a permit from the USACE.

Pursuant to Section 401 of the Clean Water Act, projects that apply for a USACE permit for discharge of dredge or fill material must obtain water quality certification from the Regional Water Quality Control Board (RWQCB) indicating that the project would uphold state water quality standards.

The USACE also requires concurrence from the San Francisco Bay Conservation and Development Commission (BCDC) before issuing a permit or authorization for work in the San Francisco Bay. The BCDC reviews the project to determine if the project is consistent with the Amended Coastal Zone Management Program for San Francisco Bay.

State Regulations

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA) and Section 2081 of the Fish and Game Code, a permit from the DFG is required for projects that could result in the take of a state-listed Threatened or Endangered species. Under CESA, the definition of "take" is understood to apply to an activity that would directly or indirectly kill an individual of a species, but the definition does not include "harm" or "harass," as the federal act does. As a result, the threshold for a take under the CESA is typically higher than that under the ESA.

California Fish and Game Code Section 1602 – Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream or lake in California that supports wildlife resources are subject to regulation by DFG, pursuant to Section 1602 of the California Fish and Game Code. Section 1602 states that it is unlawful for any person, governmental agency, state, local, or any public utility to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake without first notifying DFG of such activity. The regulatory definition of stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports wildlife, fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or have supported riparian vegetation. DFG's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife.

California Fish and Game Code Section 3513 – Protection of Migratory Birds

Under Section 3513, it is unlawful to take or possess any migratory nongame birds as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act.

Fully Protected Species under the Fish and Game Code

Protection of fully protected species is described in four sections of the Fish and Game Code that list 37 fully protected species (Fish and Game Code Sections 3511, 4700, 5050, and 5515). These statutes prohibit take or possession at any time of fully protected species. DFG is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species. DFG has

informed non-federal agencies and private parties that they must avoid take of any fully protected species in carrying out projects.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, "waters of the state" fall under the jurisdiction of the RWQCB. Under the act, the RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control non-point and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters must meet waste discharge requirements of the RWQCB which may be issued in addition to a water quality certification or waiver under Section 401 of the CWA.

San Francisco Bay Conservation and Development Commission

The BCDC was created in 1965 in response to broad public concern over the future of the San Francisco Bay. The Commission is charged with regulating all filling and dredging in San Francisco Bay. The BCDC also regulates new development within the first 100 feet inland from the Bay to ensure that maximum feasible public access to the Bay is provided. A BCDC permit must be obtained before any grading or construction can occur within areas under its jurisdiction.

California Coastal Commission Wetland Protection

The California Coastal Commission regulates wetlands in accordance with the provisions of the Coastal Act. Section 30121 of the Coastal Act broadly defines a wetland as lands within the coastal zone which may be covered periodically or permanently with shallow water. As a result, areas that do not meet the federal definition of wetlands, may receive protection under the Coastal Act. Filling of wetland protected by the Coastal Act requires prior authorization by the Coastal Commission.

Statewide Electrified Fence Project

The project includes a proposed lethal electrified fence that is similar to those found at other state prisons in California. After the prototype fence at Calipatria State Prison in Imperial County became operational in 1993, CDC personnel found that unanticipated accidental wildlife electrocutions had occurred. To address this unexpected effect, consultation was conducted between CDC, DFG, and USFWS. Based on this consultation, CDC determined that a statewide EIR was needed to assess impacts on wildlife by operation of the electrified fence at 25 existing state prisons and 4 planned facilities and to identify feasible mitigation measures (EDAW 1993). San Quentin State Prison was not included among the 29 prisons. CEQA documents prepared for the Statewide Electrified Fence Project include DEIR, Statewide Electrified Fence Project (MBA 1996); FEIR, Statewide Electrified Fence Project (MBA 1997); and FEIR Addendum, Statewide Electrified Fence Project (EDAW 1999).

Impacts of the electrified fence on species covered by ESA and CESA, and migratory birds, were evaluated further in 1999 when CDC prepared a HCP for the Statewide Electrified Fence Program. The USFWS issued a Threatened and Endangered Species Take Permit covering 62 wildlife species to CDC for the project on June 12, 2002. The permit expires in the year 2052 (EDAW 2003).

The approved Statewide Electrified Fence Project HCP includes numerous mitigation measures designed to minimize wildlife use of the areas nearest the electrified fence and to deter wildlife from making contact with the electrified fence. An extensive feasibility evaluation was conducted by CDC to determine which mitigation measures were biologically effective, cost effective, and viable based on weather, security, maintenance, and operational issues. Mitigation in the HCP was organized and

implemented in three tiers. Tier 1 measures include operations-related measures designed to modify or remove habitat or other attractants to wildlife from the secured perimeter area of each prison. Tier 2 involves installation of exclusion and deterrent devices on the electrified fences and in the perimeters. Tier 3, includes a compensation package designed to offset the residual loss of wildlife resources at each prison as a result of electrocution risks that remain even after Tier 1 and Tier 2 have been implemented. The plan also includes a wildlife mortality monitoring program that requires that a qualified biologist visit each institution with an operational electrified fence three times per year to identify carcasses of animals collected from the electrified fence perimeter by CDC staff.

4.3.3 ENVIRONMENTAL IMPACTS OF THE PROJECT

THRESHOLDS OF SIGNIFICANCE

The project would result in a significant impact on biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by DFG or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by DFG or USFWS;
- have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA(including, but not limited to, marsh, vernal pool, rivers, etc.) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan;
- substantially reduce the habitat of a fish and wildlife species, cause a fish or wildlife species to drop below self-sustaining levels, or threaten to eliminate a plant or animal community; or
- reduce the number or restrict the range of an endangered, rare or threatened species.

REMOVAL OF EXISTING VEGETATION AND WILDLIFE HABITAT

Development of the project under either design option would result in the permanent removal and/or temporary disturbance of 43.3 acres of undeveloped land that provides habitat for a number of common plant and wildlife species. The entire site would be graded before the start of construction. Under both design options, approximately 14.7 acres of disturbed non-native annual grassland, which is mostly found on the western half of the project site would be disturbed. Under the single level design option, ornamental vegetation associated with the 57 onsite residences would be removed including approximately 300 ornamental trees ranging in size from small to very large. Replacement of the portion of the water pipeline alignment on the project site would also require removal of a few native trees

located near the eastern terminus of the alignment. Approximately 1 bay laurel, 3 California buckeyes and 1 live oak tree would be disturbed during construction activities. Habitat that would be disturbed by the project is common, both locally and regionally, and the number of trees removed would be small.

Vegetation removal is not anticipated to extend beyond the external perimeter road between the San Francisco Bay and the project site; thus, a minimum of 30 feet between the perimeter roadway and San Francisco Bay would not be disturbed. No impacts to the vegetation along the shoreline and aquatic resources of the San Francisco Bay are anticipated (see Section 4.8, Hydrology and Water Quality, for a description of hydrological impacts). However, some shoreline areas would be used as construction staging areas. None of these areas would be graded or would require vegetation removal.

Wildlife species diversity on the project site is low. The low diversity is primarily attributed to the absence of native plant communities and the disturbed condition of the land. Species diversity is also limited because the project site is largely developed. The project site does not include important migration corridors or movement areas for terrestrial wildlife because it is surrounded by the existing prison facilities, residential development, roads, and the San Francisco Bay.

Although wildlife diversity and abundance in the project area would be reduced as a result of grading and construction, the loss of wildlife habitat would not be significant. Some wildlife mortality and displacement is expected. However, the impact on the local and regional populations of the animals affected would be minimal.

The project would not substantially reduce the overall amount of wildlife habitat. Impacts on wildlife diversity and abundance would be minimal and the project would not substantially impede the movement of any wildlife species. Disturbed annual grassland and ornamental vegetation such as that found on the project site is common, both locally and regionally, and is not of special concern to resource agencies. The project's impact to existing vegetation and wildlife habitat on the project site would be less than significant (Impact 4.3-a).

IMPACTS TO SPECIAL-STATUS SPECIES

A number of special-status species have been documented in the vicinity of the project site. However, no special-status species are expected on the project site and no suitable habitat for these plants and animals would be affected with implementation of the project.

Special-status plants species recorded within 1 mile of the project site include white-rayed pentachaeta and Point Reyes bird's beak. White-rayed pentachaeta is found in open, dry grasslands. Although disturbed grassland habitat is present in the project area, it is highly unlikely that this species is present because the vegetation is almost entirely limited to non-native grasses and other weedy species and the site has experienced a long history of disturbance (i.e., farming, mowing and other manipulation of the native vegetative cover). Point Reyes bird's beak is restricted to coastal salt marsh, which is absent from the project site.

Special-status wildlife species recorded within 1 mile of the project site include California clapper rail, salt marsh harvest mouse, California black rail, salt marsh common yellowthroat, and San Pablo song sparrow. All of these animals are closely tied to tidal salt and brackish marsh habitat. Because no tidal or brackish marsh habitat is found on the project site in areas where offsite improvements would occur (i.e., water pipeline alignment) or along the adjacent shoreline of the San Francisco Bay, none of these species would be affected by the project.

The project would not have a substantial adverse effect on any special-status plants or animals. No suitable habitat for these species would be removed or otherwise affected because no habitat that supports these species is present on the project site or in areas where offsite improvements would occur (i.e., water pipeline). This impact would be less than significant (Impact 4.3-b).

ELECTRIFIED FENCE IMPACTS ON WILDLIFE

The project includes installation and operation of a lethal electrified fence within the CIC's double-fenced security perimeter. Based on monitoring data collected for the 25 electrified fences at state prisons (23 locations total) in California with electrified fences, significant wildlife mortality caused by electrocution would be anticipated. Common bird species would be at greatest risk of electrocution. Lethal electrocution would result only when an animal touches two wires simultaneously or touches one wire and an electrical ground. Therefore, birds and other wildlife could come in contact with the electrified fence without being electrocuted.

Birds found in urban areas of Marin County would be at greatest risk of electrocution. Conversely, those wildlife species that prefer native habitat and avoid urbanized areas would be at lowest risk of electrocution. Based on an evaluation of the monitoring data and a survey of the project site by qualified biologists, operation of the electrified fence is not expected to result in death or harm to any threatened, endangered, or special-status species. However, it is anticipated that a substantial percentage of birds that could be electrocuted would be species that are protected under MBTA and the Fish and Game Code. Birds killed could include species that are considered locally uncommon or rare. A list of species considered at risk of electrocution at San Quentin is provided in Appendix D. This list was formulated based on ten years of bird mortality data from 25 electrified fences at 23 CDC facilities throughout California, combined with knowledge of the relative abundance of bird species in the SQSP area. Species that are considered to have only a remote chance of being killed are not included in the list.

It is not possible to accurately predict the species that would be killed or the frequency of electrocutions that would result from an electrified fence at SQSP but monitoring results collected at other state prisons since 1994 supports the following assumptions: (1) an electrified fence at SQSP could result in over 100 wildlife electrocutions annually. Statewide, in the twelve month period from June 2003 to June 2004, the total number of wildlife electrocutions at each of the state prisons with electrified fences ranged from 5 to 302 animals. During that period, a total of 1,790 animals were electrocuted at the 25 prisons (EDAW 2004); (2) of the total, the large majority of animals electrocuted would be birds; avian species account for over 95% of the statewide total in the most recent year of monitoring (EDAW 2004); and (3) non-native birds (e.g., house sparrow, European starling) would account for a substantial percentage of the total electrocutions. Statewide, non-native species accounted for 62% of the total electrocutions in the last 12 month monitoring period (EDAW 2004).

Operation of an electrified fence at SQSP would result in the death of an undetermined number of animals. The large majority of electrocutions would result in the death of birds, some of which are protected under MBTA and the Fish and Game Code. This impact would not eliminate any resident or migratory bird species and it is not expected to reduce species diversity in the project vicinity. Although not expected, it is possible that the local population of one or more native birds, protected by MBTA and the Fish and Game Code, could be substantially affected. Therefore, this would be a potentially significant impact (Impact 4.3-c).

IMPACTS TO SENSITIVE HABITATS

Implementation of the project would require fill of a narrow, excavated channel that collects piped drainage from the existing prison and surrounding hillsides. The channel occupies approximately

0.2 acres. The project also includes stabilization of the shoreline area near the existing stormwater outfall structure located on the southern shoreline of SQSP. Measures used to stabilize the structure would include removal and replacement of rock riprap and installation of water flow dissipation features (e.g. rock). The channel is almost entirely devoid of vegetation and provides minimal habitat value to native plant and wildlife species. However, the ditch provides a hydrological connection to the San Francisco Bay, supports wetland characteristics, and is tidally influenced. Therefore, the ditch likely qualifies as jurisdictional Waters of the U.S. Wetlands and other Waters of the U.S. are regulated by USACE under Section 404 of CWA and have been given regulatory protection because of their multiple functions and values, including their importance as wildlife habitat. Wetland habitat has also declined considerably this century in California as a result of flood control practices and conversion of wetlands to agricultural and urban uses.

Because of its proximity to San Francisco Bay, filling of the ditch would likely require prior authorization from BCDC. DFG could also regulate filling of the ditch under Section 1602 of the Fish and Game Code.

Implementation of the project would result in the filling of a 0.2 acre ditch that provides a hydrological connection to San Francisco Bay. The filling of these potential Waters of the U.S. would be a significant impact (Impact 4.3-d).

4.3.4 PROPOSED MITIGATION MEASURES

LESS-THAN-SIGNIFICANT IMPACTS

The following impacts were identified as less than significant, and therefore no mitigation is required:

4.3-a: Loss of Common Natural Communities/Wildlife Habitat
4.3-b: Impacts to Special-status Species

SIGNIFICANT IMPACTS THAT CAN BE MITIGATED TO A LESS-THAN-SIGNIFICANT LEVEL

The following impacts were identified as potentially significant or significant. Mitigation to reduce these impacts to a less-than-significant level is described below:

4.3-c: Electrified Fence Impacts on Wildlife

Before approval of the project, CDC will consult with USFWS and DFG to determine a course of action that minimizes wildlife electrocutions to the extent feasible and compensates for impacts on native wildlife species. It is anticipated that this would be accomplished using the tiered mitigation approach developed as part of the Statewide Electrified Fence Project. The mitigation includes a three-tiered approach that minimizes and mitigates impacts to wildlife species at risk of electrocution. Consultation with USFWS and DFG under ESA and CESA is not proposed because no state or federally listed species or candidates for listing are considered at risk of electrocution. CDC is committed to developing and implementing the three tiers of mitigation outlined below.

- **Tier 1:** The first tier of mitigation measures are those designed to eliminate or reduce wildlife attractants near the prison perimeter by implementing specific maintenance and operation procedures. By making the perimeter less hospitable, wildlife will frequent this area less often, thus reducing their exposure to accidental electrocution. Tier 1 maintenance and operation procedures, developed specifically for SQSP, will be incorporated into a handbook and a training module to be used by CDC staff.

- **Tier 2:** Second tier mitigation measures consist of both exclusion and deterrent devices. Tier 2 measures that will be installed at SQSP include a vertical netting system and anti-perching devices. CDC will install ¾-inch mesh vertical netting enveloping both sides of the lower section of the electrified fence, which would otherwise present the greatest danger to wildlife species at risk of electrocution. Anti-perching wires, which consist of 2- to 4- inch pieces of stiff wire connected to an aluminum base, will be strategically attached to the tops of perching sites in and near the perimeter. Once installed, this wire would reduce the ability of birds to perch near the electrified fence, thus reducing exposure to accidental electrocutions.

- **Tier 3:** The third tier of mitigation includes compensatory mitigation that will fully compensate for residual wildlife mortality impacts. A quantitative analysis will be completed to determine if habitat enhancement is required to offset the annual loss of migratory birds resulting from electrocution. Habitat enhancement will be developed and funded by CDC to offset, by improving opportunities for reproductive success, impacts to migratory birds affected by the project. Habitat enhancement can include property acquisition, management actions, habitat restoration, and habitat creation. The mitigation sites could include state, federal, or private lands located anywhere in California that supports a large percentage of the species at risk of electrocution at SQSP.

4.3-d: Impacts to Jurisdictional Waters of the U.S.

- Authorization for placement of fill in the ditch will be secured from USACE via the Section 404 permitting process, which could include compliance under the Nationwide Permitting (NWP) Program before project implementation and coordination with BCDC, the CDC and DFG shall be conducted as part of the process.

- As part of the Section 404 permitting process, CDC shall comply with the requirements of the NWP program or a conceptual wetlands mitigation plan shall be developed by a qualified wetland biologist. The acreage of waters of the United States that would be removed (approximately 0.2 acres) will be replaced or restored/enhanced on a "no-net-loss" basis in accordance with USACE regulations. The mitigation plan will quantify the total jurisdictional acreage lost, describe creation/replacement ratios for acres filled, annual success criteria, potential mitigation sites, and monitoring and maintenance requirements. The plan will be prepared by a qualified wetland biologist pursuant to, and through consultation with the USACE and the other regulatory agencies, as applicable. Implementation of the plan would fully compensate for the loss of jurisdictional waters of the United States.